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Figure 1

Scheme 1

Synthesis of New Crosslinkers

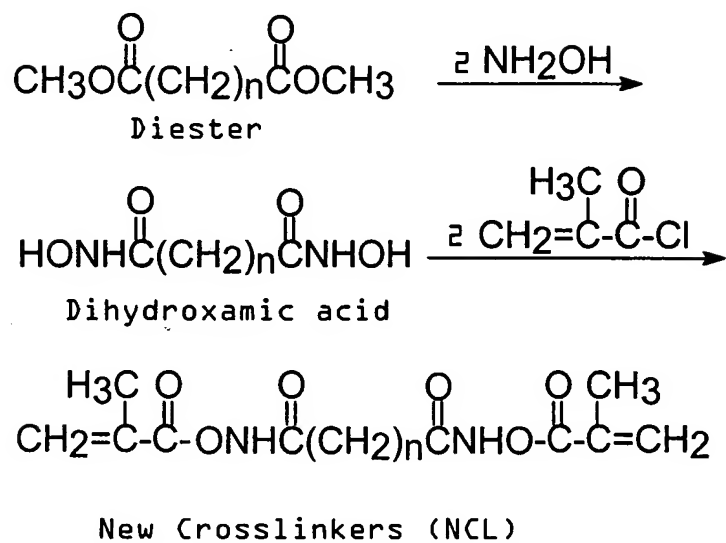
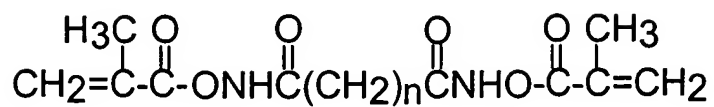


Figure 2

Five New Crosslinkers



New Crosslinkers (NCL)

n=1, N,N'-(Dimethacryloyloxy)malonamide (**C₃NCL**)

n=2, N,N'-(Dimethacryloyloxy)succinamide (**C₄NCL**)

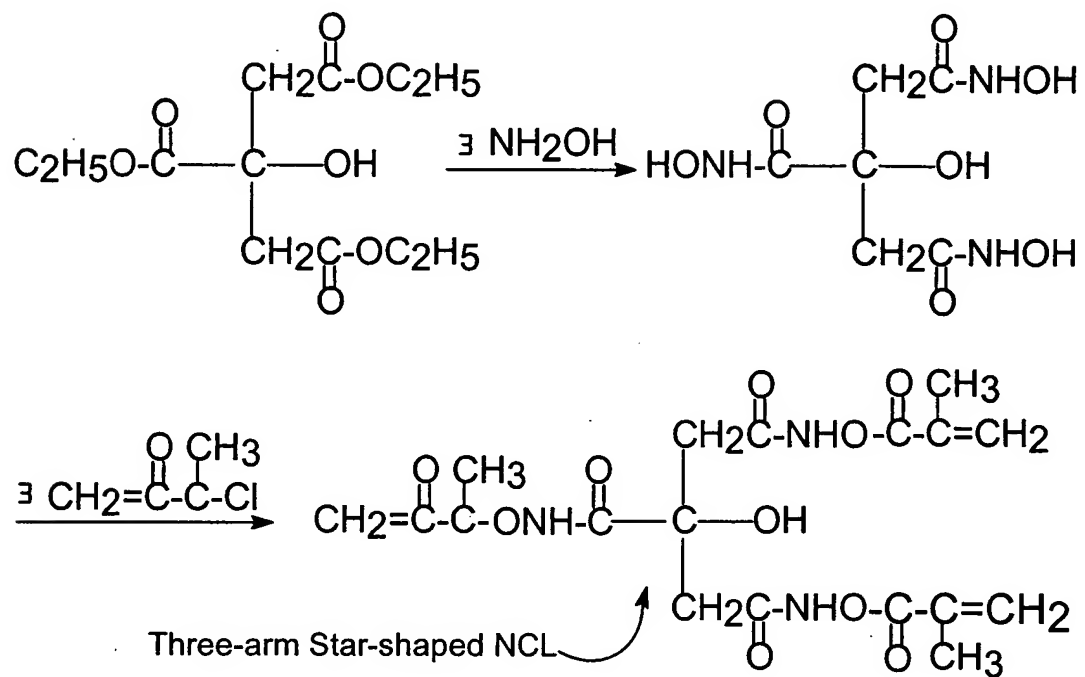
n=3, N,N'-(Dimethacryloyloxy)glutarylamine (**C₅NCL**)

n=4, N,N'-(Dimethacryloyloxy)adipamide (**C₆NCL**)

n=6, N,N'-(Dimethacryloyloxy)suberoylamide (**C₈NCL**)

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Synthesis of Star-shaped New Crosslinker



EXAMPLES OF POSSIBLE NEW DEGRADABLE CROSSLINKERS

$$\text{CH}_2=\text{C}(\text{CH}_3)-\text{C}(=\text{O})-\text{ONHC}(=\text{O})(\text{CH}_2)_n\text{C}(=\text{O})\text{NHO}-\text{C}(=\text{O})-\text{C}(\text{CH}_3)=\text{CH}_2$$
$$\text{CH}_2=\text{C}(\text{H}_3)\text{C}(=\text{O})\text{ONHC}(=\text{O})\text{CH}_2-\text{C}_6\text{H}_4-\text{CH}_2\text{C}(=\text{O})\text{NHO}-\text{C}(=\text{O})\text{C}(\text{H}_3)=\text{CH}_2$$
CC(=O)C(=O)ONC(=O)Cc1ccc(Cc2c(C(=O)NOC(=O)C(=C)C)cc2)cc1C(=O)NOC(=O)C(=C)C
$$\begin{array}{c}
 \text{H}_3\text{C}-\overset{\text{O}}{\parallel}\text{C}-\text{ONHC}(=\overset{\text{O}}{\parallel})\text{CH}_2 \\
 | \\
 \text{CH}_2=\text{C}-\text{C}-\text{ONHC}(=\overset{\text{O}}{\parallel})\text{CH}_2 \\
 | \quad \quad \quad | \\
 \text{H}_3\text{C} \quad \quad \quad \text{O}
 \end{array}
 \begin{array}{c}
 \text{CH}_2\text{CNHO}-\overset{\text{O}}{\parallel}\text{C}-\text{C}(\text{CH}_3)=\text{CH}_2 \\
 | \\
 \text{CH}_2\text{CNHO}-\overset{\text{O}}{\parallel}\text{C}-\text{C}(\text{CH}_3)=\text{CH}_2 \\
 | \quad \quad \quad | \\
 \text{O} \quad \quad \quad \text{O}
 \end{array}$$

Figure 5

Synthesis of an Acrylamide Type Crosslinker

